

Name _____

Keystone Warm-ups

Chapter 7: Cell Structure and Function

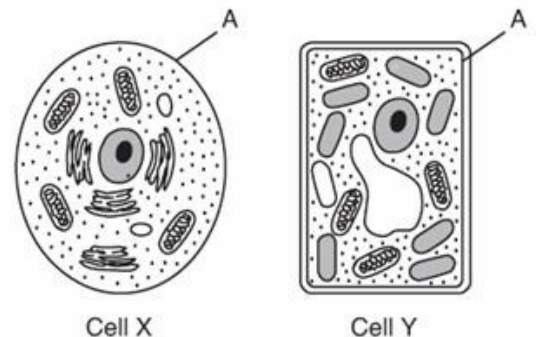
Copy down all 4 answer choices for the daily warm-up from the board in the space below its question. Choose the best answer by circling its letter. Then, after we go over it, write the correct answer in the block provided on the front of the packet.

**For this unit, you will answer 2 warm up questions each day*

1		2		3		4		5	
6		7		8		9		10	
11		12		13		14		15	
16		17		18					

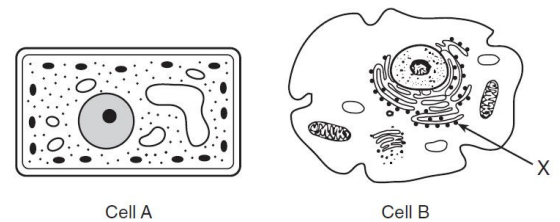
1. Which statement is correct concerning the structure labeled A?

- (A) It aids in the removal of metabolic wastes in both cell X and cell Y.
- (B) It is involved in cell communication in cell X, but not in cell Y.
- (C) It prevents the absorption of CO_2 in cell X and O_2 in cell Y.
- (D) It represents the cell wall in cell X and the cell membrane in cell Y.



2. Which statement best describes these cells?

- (A) Cell B lacks vacuoles while cell A has them.
- (B) DNA would not be found in either cell A or cell B.
- (C) Both cell A and cell B use energy released from ATP.
- (D) Both cell A and cell B produce antibiotics.



3. Living organisms can be classified as prokaryotes or eukaryotes. Which two structures are common to both prokaryotic and eukaryotic cells?

- (A) cell wall and nucleus
- (B) cell wall and chloroplast
- (C) plasma membrane and nucleus
- (D) plasma membrane and cytoplasm

4. In a cell, information that controls the production of proteins must pass from the nucleus to the

- (A) cell membrane
- (B) chloroplasts
- (C) mitochondria
- (D) ribosomes

5. What is the main function of a vacuole in a cell?

- (A) storage
- (B) coordination
- (C) synthesis of molecules
- (D) release of energy

6. The endoplasmic reticulum is a network of membranes within the cell, and it is often classified as rough or smooth, depending on whether there are ribosomes on its surface. Which statement best describes the role of rough endoplasmic reticulum in the cell?

- (A) It stores all proteins for later use.
- (B) It provides an attachment site for larger organelles.
- (C) It aids in the production of membrane and secretory proteins.
- (D) It stores amino acids required for the production of all proteins.

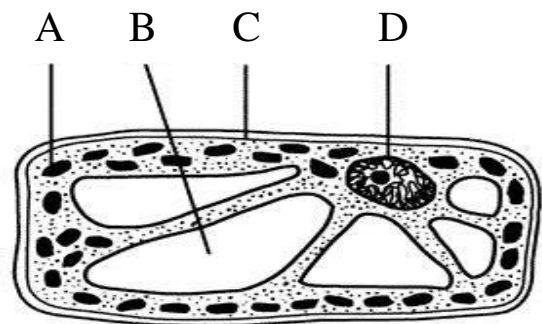
7. The rough endoplasmic reticulum and golgi apparatus work together in eukaryotic cells. What is one way that the rough endoplasmic reticulum assists the golgi apparatus?

- (A) It assembles nucleic acids from monomers.
- (B) It breaks down old, damaged macromolecules.
- (C) It packages new protein molecules into vesicles.
- (D) It determines which protein molecules to synthesize.

8. Certain poisons are toxic to organisms because they interfere with the function of enzymes in mitochondria. This results directly in the inability of the cell to

- (A) store information
- (B) build proteins
- (C) release energy from nutrients
- (D) dispose of metabolic wastes

9. Which letter indicates a cell structure that directly controls the movement of molecules into and out of the cell?



10. Which set of functions is directly controlled by the cell membrane?

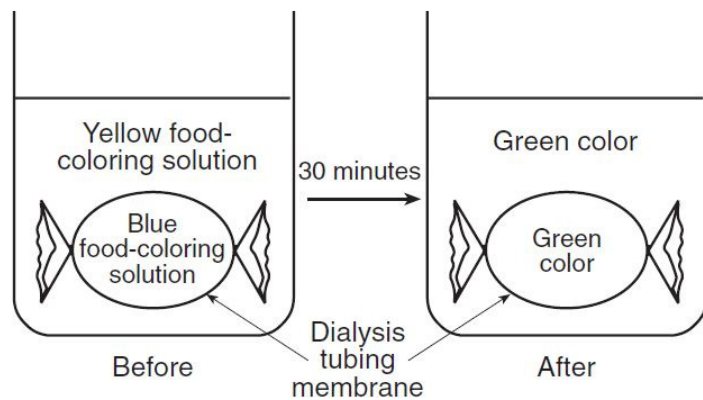
- (A) protein synthesis, respiration, digestion of food molecules
- (B) active transport, recognition of chemical messages, protection
- (C) enzyme production, elimination of large molecules, duplication of DNA codes
- (D) release of ATP molecules, regulation of cell reproduction, food production

11. Carbon dioxide and oxygen molecules can move freely across a plasma membrane. What determines the direction that carbon dioxide and oxygen molecules move?

- (A) orientation of cholesterol in the plasma membrane
- (B) concentration gradient across plasma membrane
- (C) configuration of phospholipids in the plasma membrane
- (D) location of receptors on the surface of the plasma membrane

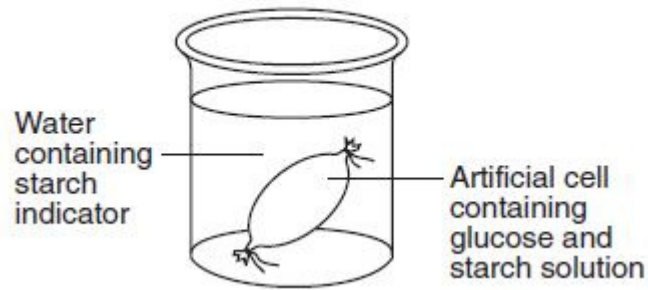
12. The diagram shows the changes that occurred in a beaker after 30 minutes. The beaker contained water, food coloring, and a bag made from dialysis tubing membrane.

When the colors yellow and blue are combined, they produce a green color.



Which statement most likely describes the relative sizes of the yellow and blue food-coloring molecules in the diagram?

- (A) The yellow molecules are small, while the blue molecules are large.
- (B) The yellow molecules are large, while the blue molecules are small.
- (C) Both the yellow molecules and the blue molecules are large.
- (D) Both the yellow molecules and the blue molecules are small.



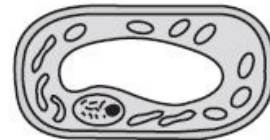
13. After two hours, the color of the liquid in the beaker did not change. This shows that

- (A) glucose moved from the artificial cell into the beaker
- (B) starch did not pass out of the artificial cell
- (C) starch was digested to glucose in the artificial cell
- (D) glucose molecules combined to produce starch in the artificial cell

14. This laboratory setup would most likely be used to demonstrate

- (A) carbohydrate synthesis
- (B) active transport
- (C) diffusion
- (D) dehydration

15. The diagram to the right represents a plant cell in tap water as seen with a compound light microscope.



Which diagram below best represents the appearance of the cell after it has been placed in a 15% salt solution for two minutes?



A



B



C



D

16. A sodium-potassium pump within a cell membrane requires energy to move sodium and potassium ions into or out of a cell. The movement of glucose into or out of a cell does not require energy. Which statement best describes the movement of these materials across a cell membrane?

- (A) Sodium and potassium ions move by active transport and glucose moves by osmosis.
- (B) Sodium and potassium ions move by active transport, and glucose moves by facilitated diffusion.
- (C) Sodium and potassium ions move by facilitated diffusion, and glucose moves by osmosis.
- (D) Sodium and potassium ions move by facilitated diffusion, and glucose moves by active transport.

17. When a person does strenuous exercise, small blood vessels (capillaries) near the surface of the skin increase in diameter. This change allows the body to be cooled. These statements best illustrate

- (A) synthesis
- (B) homeostasis
- (C) excretion
- (D) locomotion

18. Some human body cells are shown to the right.

These groups of cells represent different

- (A) tissues in which similar cells function together
- (B) organs that help to carry out a specific life activity
- (C) systems that are responsible for a specific life activity
- (D) organelles that carry out different functions

